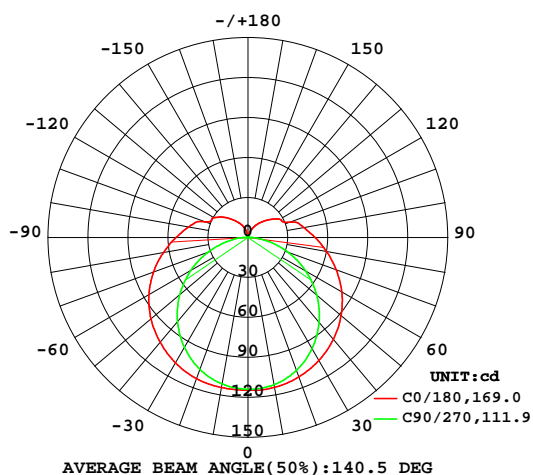


LUMINAIRE PHOTOMETRIC TEST REPORT

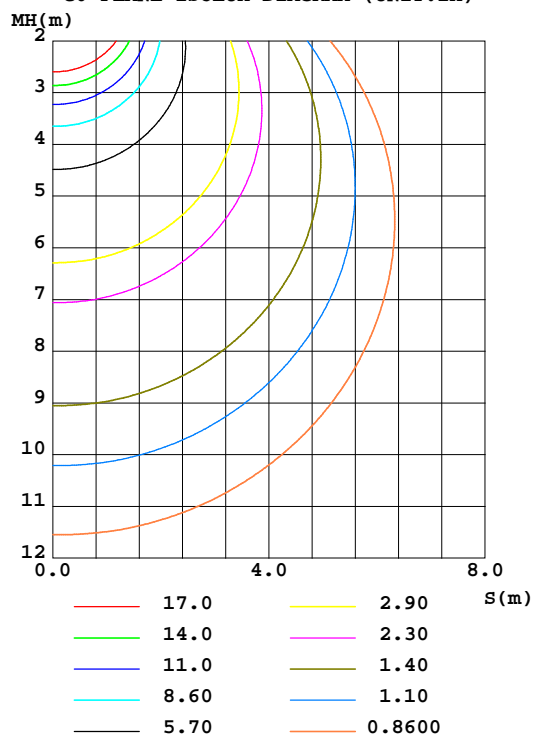
Test:U:24.00V I:0.4340A P:10.42W PF:1.000 Freq:0Hz Lamp Flux:518.097x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8WW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 49.74 lm/W			
MODEL	NNS1224	I _{max} (cd)	114.8	S/MH(C0/180)	1.42
NOMINAL POWER(W)	9.6	LOR(%)	100.0	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	518.10	h UP,DN(C0-180)	8.5,40.6
NOMINAL FLUX(lm)	518.097	CIE CLASS	SEMI-D.	h UP,DN(C180-360)	9.2,41.6
LAMPS INSIDE	1	h up(%)	17.7	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24	h down(%)	82.3	CIBSE SHR MAX	1.50

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:COLORS
 Test Date:2019-07-01

g Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:10.750m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

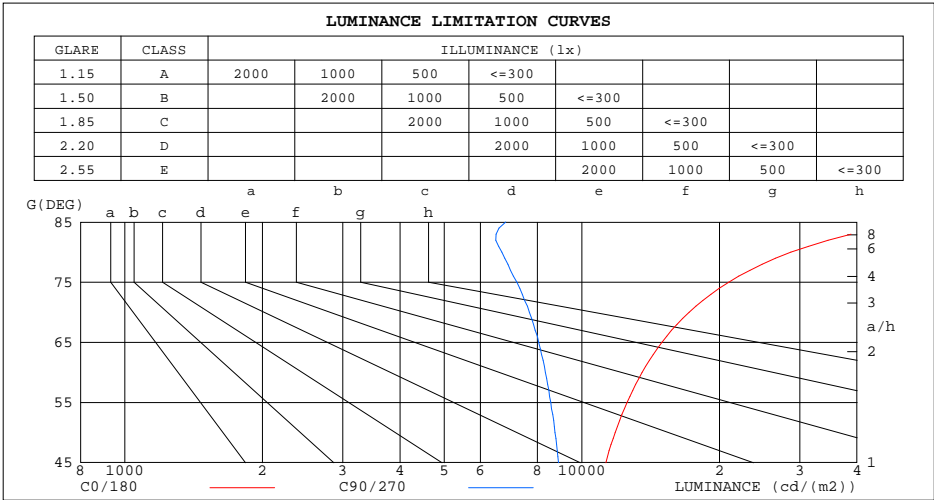
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	114.3	112.2	114.4	111.6					0~ 10	10.86	10.86	2.1,2.1
20	111.4	106.2	112.8	105.4					10~ 20	31.49	42.34	8.17,8.17
30	106.5	96.33	108.7	95.36					20~ 30	48.76	91.10	17.6,17.6
40	99.77	83.08	102.7	82.32					30~ 40	60.83	151.9	29.3,29.3
50	91.24	67.37	95.07	66.82					40~ 50	66.63	218.6	42.2,42.2
60	81.28	49.95	85.84	49.62					50~ 60	65.84	284.4	54.9,54.9
70	70.46	31.52	75.44	31.37					60~ 70	58.95	343.4	66.3,66.3
80	59.79	13.93	64.34	14.01					70~ 80	47.52	390.9	75.4,75.4
90	50.48	2.881	54.11	3.329					80~ 90	35.28	426.2	82.3,82.3
100	42.89	0.4250	45.51	0.4242					90~100	26.93	453.1	87.5,87.5
110	34.06	0.6438	34.88	0.6146					100~110	21.67	474.8	91.6,91.6
120	27.65	0.8950	29.78	0.8316					110~120	15.42	490.2	94.6,94.6
130	20.93	1.108	23.82	1.040					120~130	11.95	502.1	96.9,96.9
140	14.93	1.268	17.46	1.181					130~140	7.919	510.0	98.4,98.4
150	9.622	1.461	12.23	1.345					140~150	4.679	514.7	99.3,99.3
160	5.093	1.745	7.486	1.661					150~160	2.368	517.1	99.8,99.8
170	1.822	2.021	1.751	1.938					160~170	0.8171	517.9	100,100
180	1.751	2.221	1.757	2.208					170~180	0.1827	518.1	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:24.00V I:0.4340A P:10.42W PF:1.000 Freq:0Hz Lamp Flux:518.097x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8WW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



LUMINANCE cd/(m2)		
G(180)	C0/180	C90/270
85	52456	6816
80	28694	6686
75	20955	7215
70	17167	7681
65	14968	8042
60	13546	8325
55	12556	8548
50	11828	8734
45	11282	8896

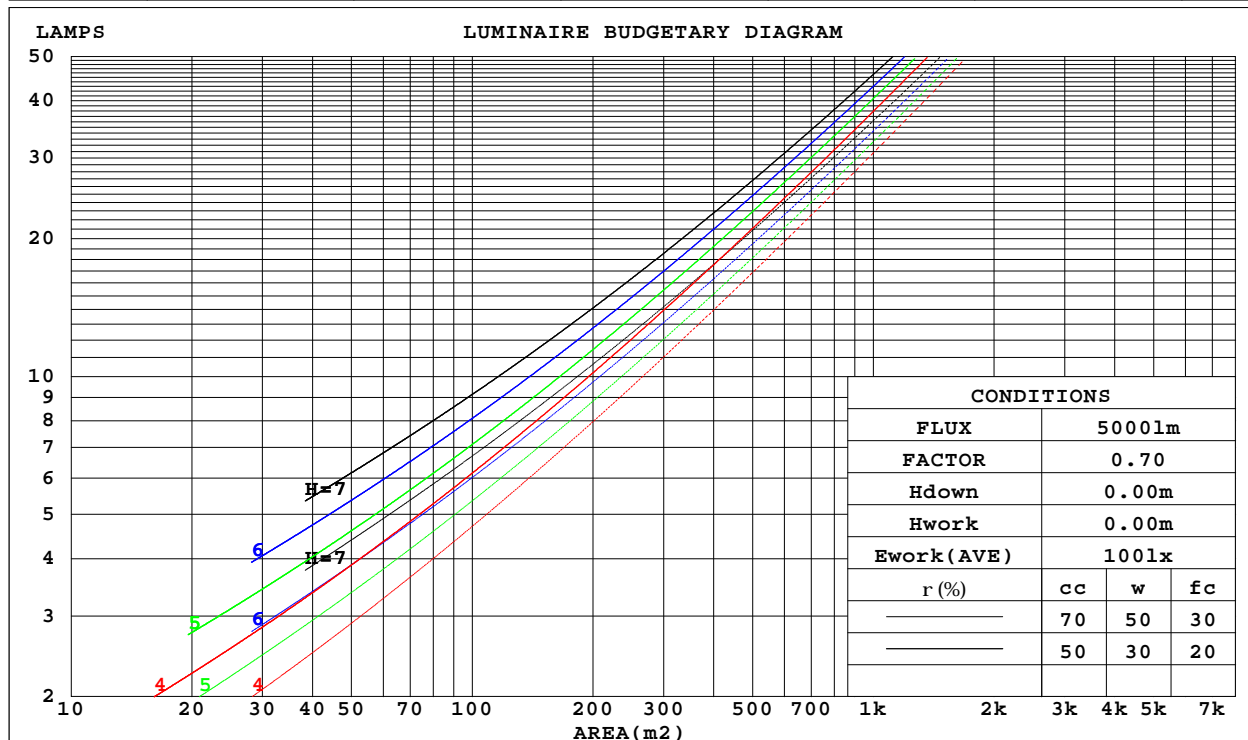
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.00V I:0.4340A P:10.42W PF:1.000 Freq:0Hz Lamp Flux:518.097x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8WW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r _{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Coefficients of Utilization(CU)												
0.0	1.15	1.15	1.15	1.10	1.10	1.10	1.01	1.01	1.01	.93	.93	.93	.86	.86	.86	.82
1.0	.96	.91	.86	.92	.87	.83	.84	.81	.77	.77	.74	.72	.71	.69	.66	.63
2.0	.82	.75	.68	.79	.72	.66	.72	.67	.62	.66	.62	.58	.61	.57	.54	.50
3.0	.71	.63	.55	.68	.60	.54	.63	.56	.51	.58	.52	.47	.53	.48	.44	.41
4.0	.63	.53	.46	.60	.52	.45	.55	.48	.42	.51	.45	.40	.47	.42	.37	.35
5.0	.56	.46	.39	.53	.45	.38	.49	.42	.36	.45	.39	.34	.42	.36	.32	.29
6.0	.50	.41	.34	.48	.39	.33	.44	.37	.31	.41	.35	.30	.38	.32	.28	.25
7.0	.45	.36	.30	.43	.35	.29	.40	.33	.27	.37	.31	.26	.34	.29	.25	.22
8.0	.41	.32	.26	.39	.31	.26	.37	.29	.24	.34	.28	.23	.31	.26	.22	.20
9.0	.37	.29	.23	.36	.28	.23	.34	.27	.22	.31	.25	.21	.29	.24	.20	.18
10.0	.34	.26	.21	.33	.26	.21	.31	.24	.20	.29	.23	.19	.27	.22	.18	.16



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:24.00V I:0.4340A P:10.42W PF:1.000 Freq:0Hz Lamp Flux:518.097x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8WW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

rcc	80%			70%			50%			30%			10%			0														
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0														
rfc	20%			20%			20%			20%			20%			0														
RCR	RCR:Room Cavity Ratio															Wall Exitance Coefficients(WEC)														
0.0																														
1.0	.377	.214	.068	.364	.208	.066	.340	.195	.062	.319	.184	.059	.299	.173	.056															
2.0	.329	.180	.055	.317	.175	.054	.296	.165	.051	.276	.155	.049	.258	.146	.046															
3.0	.293	.156	.047	.283	.151	.046	.264	.143	.043	.246	.135	.041	.229	.127	.039															
4.0	.265	.137	.040	.255	.134	.039	.238	.126	.038	.221	.119	.036	.206	.112	.034															
5.0	.241	.123	.036	.232	.119	.035	.217	.113	.033	.202	.106	.032	.188	.100	.030															
6.0	.221	.111	.032	.213	.108	.031	.199	.102	.030	.185	.096	.028	.173	.091	.027															
7.0	.204	.101	.029	.197	.098	.028	.184	.093	.027	.171	.088	.026	.160	.083	.024															
8.0	.189	.092	.026	.183	.090	.025	.171	.085	.024	.159	.081	.023	.149	.076	.022															
9.0	.176	.085	.024	.171	.083	.023	.159	.079	.022	.149	.075	.021	.139	.071	.020															
10.0	.165	.079	.022	.160	.077	.022	.149	.073	.021	.140	.069	.020	.130	.066	.019															

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Ceiling Cavity Exitance Coefficients(CCEC)												
0.0	.326	.326	.326	.278	.278	.278	.190	.190	.190	.109	.109	.109	.035	.035	.035	
1.0	.321	.292	.265	.275	.250	.228	.188	.172	.158	.108	.100	.092	.035	.032	.030	
2.0	.314	.269	.231	.269	.232	.199	.185	.160	.139	.106	.093	.082	.034	.030	.027	
3.0	.307	.252	.209	.263	.218	.181	.181	.151	.127	.104	.088	.075	.034	.029	.025	
4.0	.299	.240	.195	.257	.207	.169	.177	.144	.119	.102	.085	.070	.033	.028	.023	
5.0	.292	.230	.185	.250	.199	.161	.172	.139	.113	.100	.082	.067	.032	.027	.022	
6.0	.284	.222	.178	.244	.192	.155	.169	.135	.109	.098	.079	.065	.032	.026	.021	
7.0	.277	.216	.172	.238	.187	.150	.165	.131	.106	.096	.077	.063	.031	.025	.021	
8.0	.271	.210	.168	.233	.182	.147	.161	.128	.104	.094	.075	.062	.030	.025	.021	
9.0	.264	.205	.165	.228	.178	.144	.158	.125	.102	.092	.074	.061	.030	.024	.020	
10.0	.258	.201	.163	.223	.175	.142	.155	.123	.101	.090	.073	.060	.029	.024	.020	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.00V I:0.4340A P:10.42W PF:1.000 Freq:0Hz Lamp Flux:518.097x1 lm											
NAME: NNS1224					TYPE:			WEIGHT:			
SPEC.:NNS1224-8WW24CSS050CC0100					DIM.: 1000*12*24mm			SERIAL No.:			
MFR.: Colors					SUR.:1000*12			Shielding Angle:			
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3	
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3	
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Room dimensions		Viewed crosswise					Viewed endwise				
x = 2H y = 2H	23.1	24.4	23.6	24.9	25.5	21.4	22.7	21.9	23.2	23.8	
	3H	25.7	26.9	26.2	27.5	28.1	22.9	24.2	23.5	24.7	25.3
	4H	27.1	28.3	27.7	28.9	29.5	23.6	24.8	24.1	25.3	25.9
	6H	28.7	29.9	29.3	30.4	31.1	24.1	25.2	24.6	25.8	26.4
	8H	29.6	30.7	30.2	31.3	32.0	24.2	25.3	24.8	25.9	26.6
	12H	30.7	31.7	31.3	32.3	33.0	24.3	25.4	24.9	26.0	26.7
4H	2H	23.6	24.8	24.2	25.4	26.0	22.3	23.5	22.9	24.1	24.7
	3H	26.4	27.4	27.0	28.0	28.7	24.2	25.2	24.8	25.8	26.5
	4H	28.0	29.0	28.6	29.6	30.3	25.0	26.0	25.6	26.6	27.3
	6H	29.8	30.7	30.5	31.3	32.0	25.7	26.5	26.3	27.2	27.9
	8H	30.8	31.6	31.5	32.3	33.1	25.9	26.7	26.6	27.4	28.2
	12H	32.0	32.8	32.7	33.5	34.2	26.1	26.9	26.8	27.6	28.3
8H	4H	28.3	29.1	28.9	29.7	30.5	25.8	26.6	26.5	27.3	28.0
	6H	30.3	31.0	31.0	31.7	32.5	26.8	27.5	27.5	28.2	29.0
	8H	31.6	32.2	32.3	32.9	33.7	27.3	27.9	28.0	28.6	29.4
	12H	33.0	33.6	33.7	34.3	35.1	27.7	28.2	28.4	29.0	29.8
12H	4H	28.3	29.0	29.0	29.7	30.5	26.1	26.8	26.7	27.5	28.3
	6H	30.4	31.0	31.1	31.7	32.6	27.3	27.9	28.0	28.6	29.4
	8H	31.7	32.3	32.5	33.0	33.8	27.9	28.4	28.6	29.1	30.0
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.5					

CIE Pub.117, 518.1 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -2.3)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:24.00V I:0.4340A P:10.42W PF:1.000 Freq:0Hz Lamp Flux:518.097x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8WW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

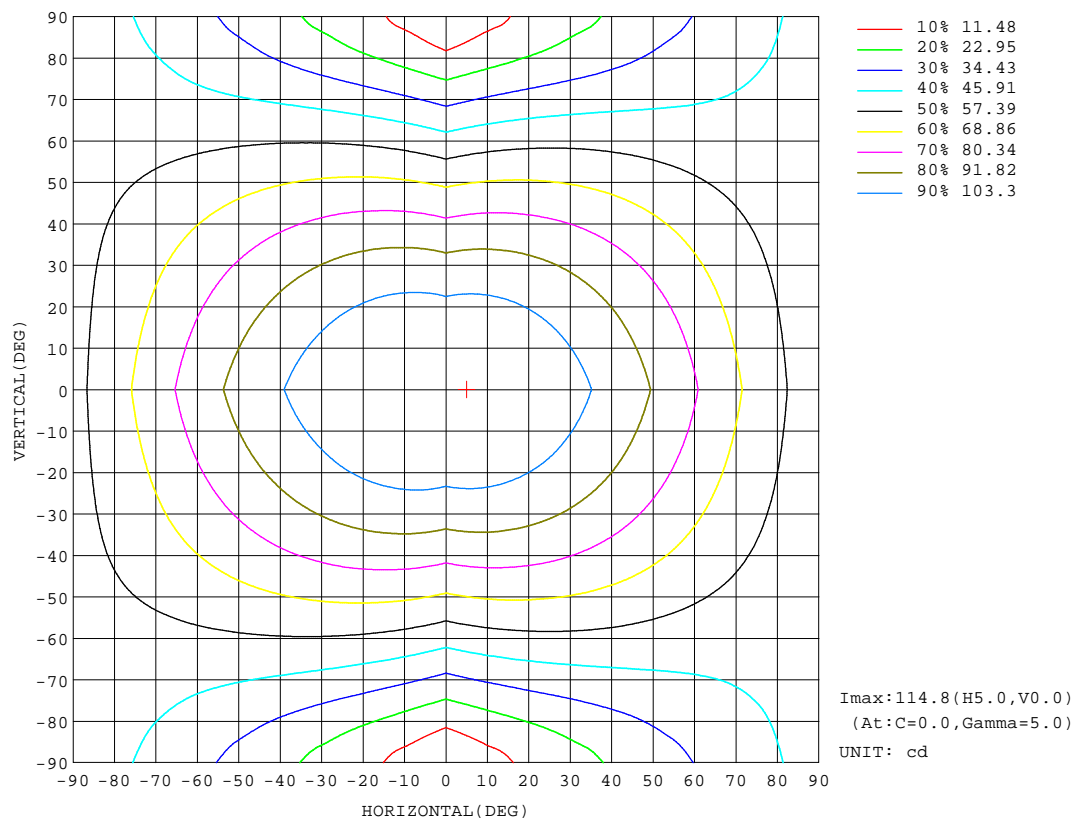
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	48	36	29	47	35	28	45	34	28	21
0.80	57	44	36	56	44	36	53	42	35	27
1.00	65	52	44	63	51	43	60	52	42	34
1.25	72	60	51	70	58	50	65	56	49	39
1.50	77	65	57	75	64	56	70	60	54	43
2.00	85	74	65	81	72	64	76	68	61	50
2.50	89	79	71	86	77	69	79	72	66	53
3.00	93	84	76	89	81	74	82	76	70	57
4.00	97	90	83	93	87	81	86	81	76	62
5.00	100	94	88	96	90	85	89	84	80	65
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:24.00V I:0.4340A P:10.42W PF:1.000 Freq:0Hz Lamp Flux:518.097x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8WW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



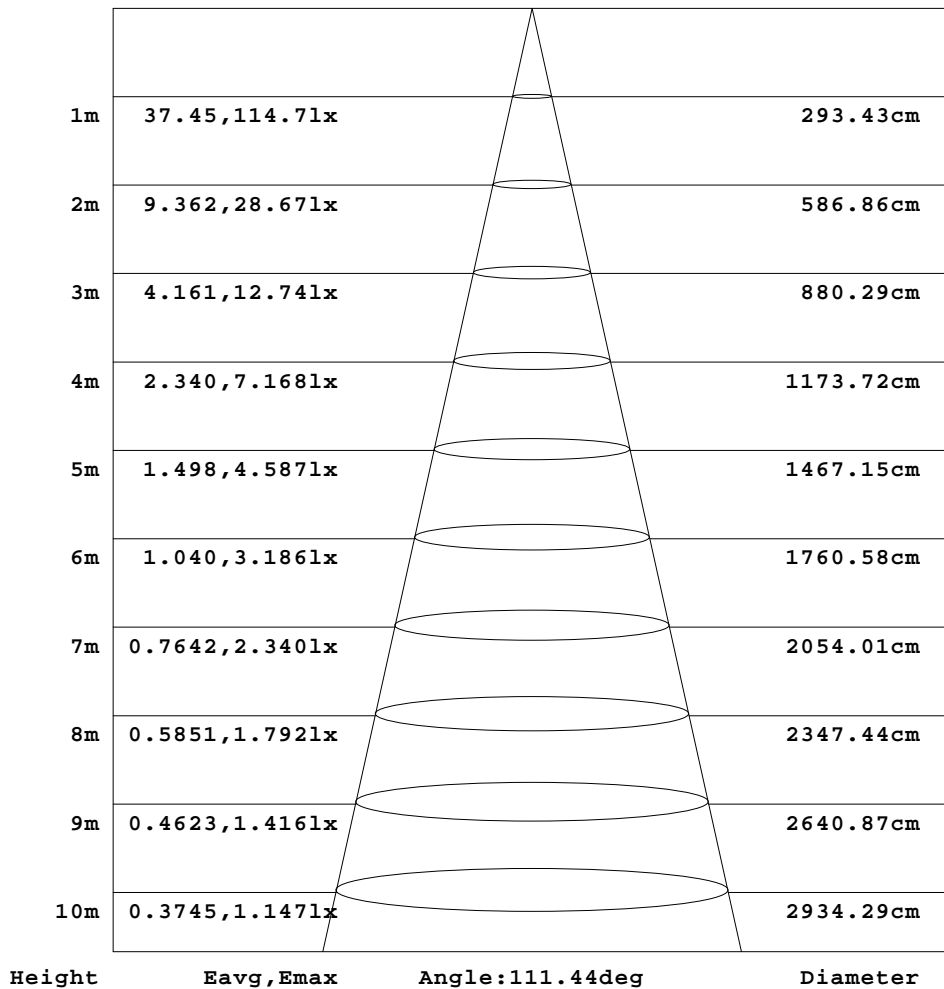
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

deg Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

AAI Figure

Test:U:24.00V I:0.4340A P:10.42W PF:1.000 Freq:0Hz Lamp Flux:518.097x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8WW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Flux out:258.6 lm



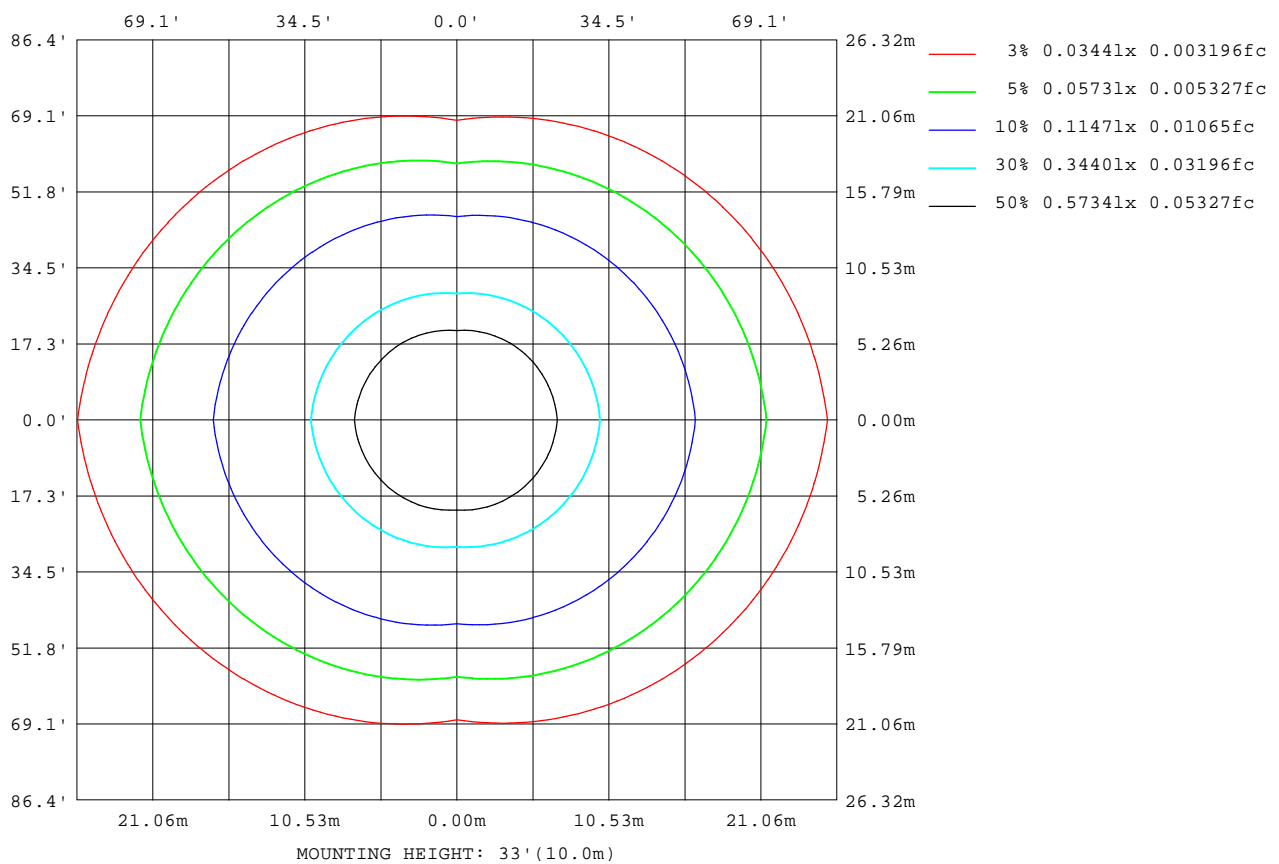
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:24.00V I:0.4340A P:10.42W PF:1.000 Freq:0Hz Lamp Flux:518.097x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8WW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:24.00V I:0.4340A P:10.42W PF:1.000 Freq:0Hz Lamp Flux:518.097x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8WW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

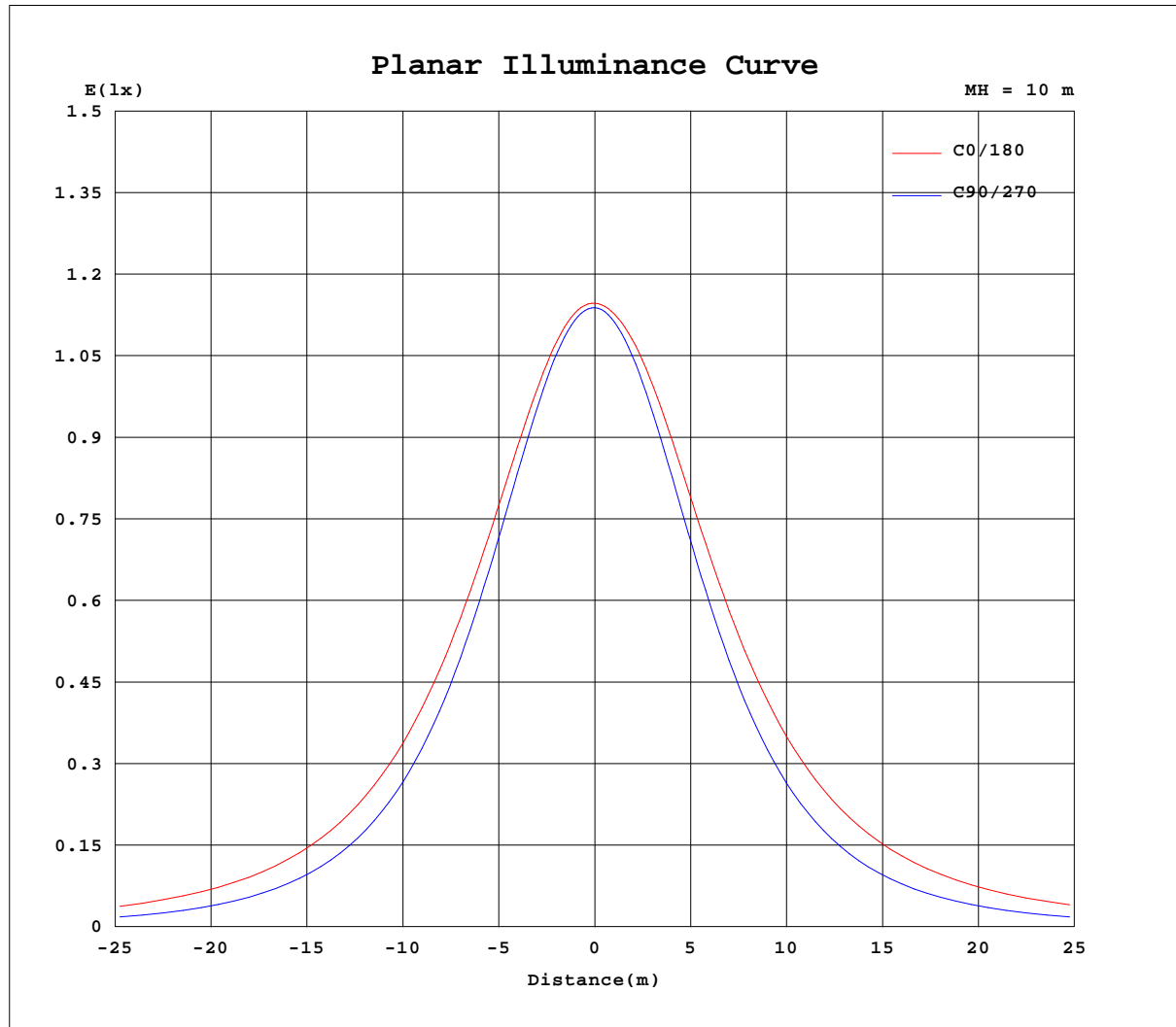
AvgL	cd/m2
L_0~180(65)av	15445
L_0~180(75)av	21727
L_0~180(85)av	54454
L_90~270(65)av	8021
L_90~270(75)av	7199
L_90~270(85)av	7106
L_45(65)av	10835
L_45(75)av	12695
L_45(85)av	24987

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: COLORS
Test Date: 2019-07-01

Range: 0 - 180DEG
Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 10.750m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.4340A P:10.42W PF:1.000 Freq:0Hz Lamp Flux:518.097x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8WW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Table--1

UNIT: cd

C(DEC) g (DEC)	0	90	180	270														
0	115	114	115	114														
5	115	114	115	113														
10	114	112	114	112														
15	113	110	114	109														
20	111	106	113	105														
25	109	102	111	101														
30	107	96.3	109	95.4														
35	103	90.0	106	89.2														
40	99.8	83.1	103	82.3														
45	95.7	75.5	99.1	74.9														
50	91.2	67.4	95.1	66.8														
55	86.4	58.8	90.7	58.4														
60	81.3	49.9	85.8	49.6														
65	75.9	40.8	80.7	40.6														
70	70.5	31.5	75.4	31.4														
75	65.1	22.4	69.9	22.3														
80	59.8	13.9	64.3	14.0														
85	54.9	7.13	59.0	7.74														
90	50.5	2.88	54.1	3.33														
95	46.4	0.70	49.6	0.37														
100	42.9	0.42	45.5	0.42														
105	39.9	0.52	41.8	0.48														
110	34.1	0.64	34.9	0.61														
115	28.6	0.77	30.4	0.70														
120	27.6	0.89	29.8	0.83														
125	24.4	1.00	26.9	0.97														
130	20.9	1.11	23.8	1.04														
135	17.7	1.19	20.6	1.09														
140	14.9	1.27	17.5	1.18														
145	12.3	1.36	14.6	1.26														
150	9.62	1.46	12.2	1.35														
155	7.01	1.58	10.0	1.51														
160	5.09	1.74	7.49	1.66														
165	2.33	1.89	4.72	1.87														
170	1.82	2.02	1.75	1.94														
175	1.75	2.14	1.71	2.10														
180	1.75	2.22	1.76	2.21														

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks: